

### ABSTRACT OF THE DISCLOSURE

A sputtering target contains a target material including as constituent elements Ag, In, Te and Sb with the respective atomic percents (atom.%) of  $\alpha$ ,  $\beta$ ,  $\gamma$  and  $\delta$  thereof being in the relationship of  $0.5 \leq \alpha < 8$ ,  $5 \leq \beta \leq 23$ ,  $17 \leq \gamma \leq 38$ ,  $32 \leq \delta \leq 73$ ,  $\alpha \leq \beta$ , and  $\alpha + \beta + \gamma + \delta = 100$ , and a method of producing the above sputtering target is provided. An optical recording medium includes a recording layer containing a phase-change recording material which includes as constituent elements Ag, In, Te and Sb with the respective atomic percents of  $\alpha$ ,  $\beta$ ,  $\gamma$  and  $\delta$  thereof being in the relationship of  $1 \leq \alpha < 6$ ,  $7 \leq \beta \leq 20$ ,  $20 \leq \gamma \leq 35$ ,  $35 \leq \delta \leq 70$ , and  $\alpha + \beta + \gamma + \delta = 100$ , and is capable of recording and erasing information by utilizing the phase change of the recording material in the recording layer. A method of forming the above recording layer for the optical recording medium is also provided. In addition, there is provided an optical recording method using the above-mentioned phase-change optical recording medium.